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THE ECOLOGY OF THE MANGROVES OF SOUTH FLORIDA:
A COMMUNITY PROFILE

by

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CHAPTER 10. COMMUNITY COMPONENTS - MAMMALS

Thirty-six native and nine introduced species of land mammals occur in the south Florida region (Layne 1974; Hamilton and Whittaker 1979). Of these, almost 50% (18 species) are found in the mangrove zone (Layne 1974). In addition, two species of marine mammals are known from mangrove areas. Data on the abundance and food habits of these 20 species are summarized in Appendix E. All are permanent residents. The criteria for inclusion in this table are similar to those used for the avifauna. Sight records in mangroves or locality data from known mangrove areas were required before a species was included. This has produced a conservative estimate of the mammal species that utilize mangrove areas.

Several mammals do not appear in Appendix E because they have not been recorded from mangrove swamps in south Florida; however, they occur so widely that we suspect they will be found in this habitat in the future. This group includes the cotton mouse, Peromyscus gossypinus, the hispid cotton rat, Sigmodon hispidus, the round-tailed muskrat, Neofiber alleni, the house mouse, Mus musculus, the least shrew, Cryptotis parva, and the short-tailed shrew, Blarina brevicauda.

Few rodents and no bats are included in Appendix E. Compared to the rest of the State, the south Florida region is deficient in these two groups (Layne 1974). Although we have no confirmative field data, we suspect that mangrove swamps along the central and north Florida coasts contain more mammal species, particularly rodents and bats.

A number of medium-sized and large carnivores, including panther, gray fox, bobcat, striped skunk, raccoon, mink, river otter, and black bear, appear to utilize south Florida mangrove areas. Only three of these species (striped skunk, raccoon, and bobcat) are common in mangroves, but several of the rarer species seem to be highly dependent on mangrove swamps. Of 18 recent sightings of the panther in Everglades National Park, 15 were from mangrove ecosystems

(Layne 1974). Hamilton and Whittaker (1979) state that it is the coastal hammocks of south Florida, including mangrove areas, which serve to preserve this species in the Eastern United States. Shemnitz (1974) reported that most of the remaining panthers were found in the southwest portion of Florida along the coast and in the interior Everglades regions.

The extent to which other carnivores use mangrove areas varies widely among species. Schwartz (1949) states that mink, although rare, prefer mangroves to other coastal habitats in Florida. Layne (1974, see his figure 1) gives a disjunct distribution for this species in Florida, with the major geographical range being the southwest coast. River otters also utilize mangrove habitat heavily. Otters have been found even far from shore on small mangrove overwash islands in Florida Bay (Layne 1974). Gray fox are not dependent upon mangroves, although they occasionally use this habitat. Less than 20% of all sightings of this species in Everglades National Park were from mangroves (Layne 1974). Bobcat are found in almost all habitats in south Florida from pine-lands to dense mangrove forests. The preponderance of recent sightings, however, has been made from the mangrove zone, particularly on offshore mangrove overwash islands (Layne 1974). Black bear are apparently most abundant in the Big Cypress Swamp of Collier County (Shemnitz 1974) and are rare in the remainder of south Florida.

The small mammal fauna of the mangrove zone of south Florida are predominately arboreal and terrestrial species which are adapted to periodic flooding. Opossum, marsh rabbits, cotton rats, and rice rats are commonly found in mangrove swamps. The Cudjoe Key rice rat is a newly described species found only on Cudjoe Key in the Florida Keys. This species appears to be closely associated with stands of white mangroves (Hamilton and Whittaker 1979).

White-tailed deer are common in

Florida mangrove swamps, although they utilize many other habitats. The key deer, a rare and endangered subspecies, is restricted to the Big Pine Key group in the Florida Keys, although it ranged onto the mainland in historical times. Although this little deer makes use of pine uplands and oak hammocks, it extensively exploits mangrove swamps for food and cover.

Two marine mammals, the bottlenose porpoise and the manatee, frequent mangrove-lined waterways. The bottlenose porpoise feeds on mangrove-associated fishes such as the striped mullet, Mugil cephalus. Although the manatee feeds

primarily upon sea grasses and other submerged aquatic plants, it is commonly found in canals, coastal rivers, and embayments close to mangrove swamps.

Except for the Cudjoe Key rice rat, none of the mammals found in Florida mangroves are solely dependent upon mangrove ecosystems; all of these species can utilize other habitats. The destruction of extensive mangrove swamps would, however, have deleterious effects on almost all of these species. Populations of panther, key deer, and the river otter would probably be the most seriously affected, because they use mangrove habitat extensively.